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## EXHIBIT A

<u>TITLES</u>	<u>PAGE</u>
Subcloning p11 (pT1-HP): the Hind III-PstI 0.95kb Fragment of Genomic Clone T11	1
Sequencing p11 (0.95kb)	2
Titration and Mini-Prep of the Okayama-Berg cDNA Library (Normal Human Fibroblasts cDNA Library)	3
Isolation of 0.2 kbp Subfragment of $\lambda$ EF 17 to Screen a M426 Human Embryo Fibroblast cDNA Library	4
Mini-preparation of Plasmid DNA: DNA Clones TR1 through 6 and TR8	5
Subcloning TR4	6
Minipreparation of Plasmid DNA: pSSV/TR4 ( $\alpha$ -PDGF-R) and HPR ( $\beta$ -PDGF-R)	7
Binding of $^{125}$ I-labeled Human PDGF to Control Mouse 3T3 cells, Control COS-1 cells and COS-1 cells transfected with T11 ( $\alpha$ -PDGF-R) Or HPR( $\beta$ -PDGF-R) cDNA Expression Vectors	8

Subcloning p11 (pT1-HP): the Hind III-PstI  
0.95kb Fragment of Genomic Clone T11

870409

Subcloning

p11

Sac I - Pst I  
Pst I - Hind III

Digestion of p11-6 by Sac I - Hind III - Pst I

DNA 45  $\mu$ l ( $\leq 3 \mu$ g) 1  $\mu$ g p11-6 (4/9 miniprep.)Sac I 2  $\mu$ l10 $\times$ B 20  $\mu$ lddH<sub>2</sub>O 133  $\mu$ ltotal 200  $\mu$ l

37°C 1 hr

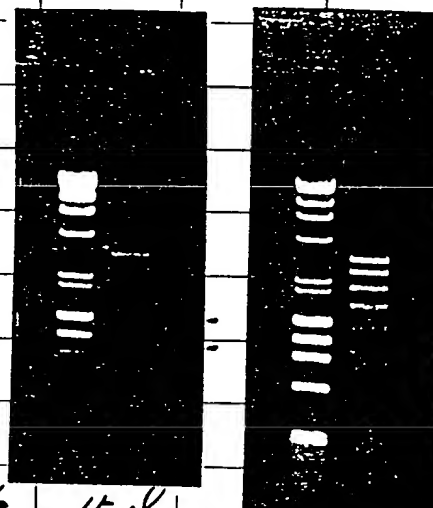
Hind III 2  $\mu$ l10 $\times$ B 10  $\mu$ l1M Tris 8.0 8  $\mu$ l5M NaCl 2  $\mu$ lddH<sub>2</sub>O 78  $\mu$ ltotal 300  $\mu$ l

37°C 1 hr

Pst I 2  $\mu$ l~~10 $\times$ B 10  $\mu$ l~~5M NaCl 3  $\mu$ lddH<sub>2</sub>O 95  $\mu$ l

Sac-Pst I 1.2 kb 80 ng

Pst I - Hind III 0.95 kb 63 ng

400  $\mu$ l 37°C 1 hr  $\rightarrow$  check 15  $\mu$ l5  $\mu$ l (5  $\mu$ g tRNA)12  $\mu$ l (5M NaCl) $\downarrow$  Phenol ext. 5 min. ( $\rightarrow$  CIAA ext.) $\downarrow$  c/g 10 min. $\downarrow$  EtOH 1 ml dry ice. 20 min.  $\rightarrow$  c/g 15 min $\downarrow$  Wash c 70% EtOH  $\rightarrow$  c/g 5 min $\downarrow$  lyophilize 7 min $\downarrow$  Resolue in 32  $\mu$ l TE + Bt 8  $\mu$ l

870409

Subcloning

p11 / SacI-HindIII 2.2 kb fragment

(cont.)

resolve in 50  $\mu$ l TE

Add Sph B-J

EP 1% Agarose

(Embryo gel 3 lanes)

214 0.5  $\mu$ g

Gene clean.

③ Agarose 0.1 g

NAI 25  $\mu$ l. 250  $\mu$ lGlass milk 5  $\mu$ lNEW 250  $\mu$ lTE 2.5  $\mu$ l  $\times$  2

Subcloning

p11 / SacI-PstI 1.2 kb

inst

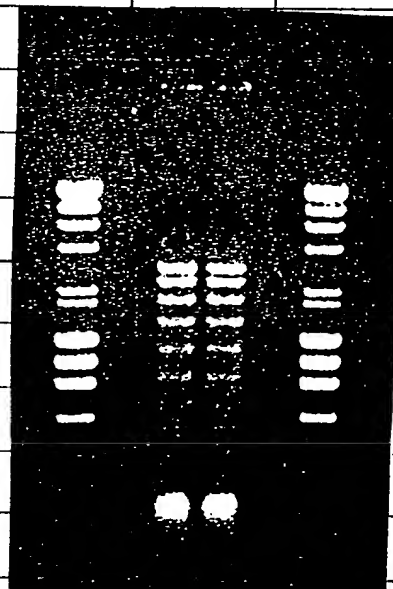
p11 / PstI-HindIII 0.95 kb

EP 1% Agarose

(Minigel 2 lanes)

Gene clean 1.2 0.95

Agarose 0.07 0.18

NAI 175  $\mu$ l 450Glass milk 5  $\mu$ l 5  $\mu$ lNEW 250  $\mu$ l 250  $\mu$ lTE 2.5  $\times$  2 2.5  $\times$  2

→ 25 ng  
→ total 20 ng

Sequencing p11 (0.95kb)

870412

Sequencing of p11 - PstI HindIII / 0.95 kb

#128-2 18 µl. Alkali denature

(left primer (R-over)  
right primer

16000 v/hr / 1300 v = 12.3 hr

1 20:45 →

2 22:35 → 10:55

Fixation 10% methanol / 10% Acetate / 2h  
15 min. after detaching gel from plate  
Gel dryer 80°C 50 min  
Autoradiography 0/4 RT





50% -  $\frac{h}{m}$

①  $93 / 112 \text{ kg}$   
 $= 83.0\%$

②  $79 / 94 \text{ kg}$   
 $= 84.0\%$

IFIND - INTELLIGENETICS

Page 1

→ exon

P11SA--MOUSE PDGF RECEPTOR

460

TTGGCTTTTAGTGGCACCCTTACCCCGGCATGATGTTGGATTCTACTTTCTACAATAA

CTTCACACTGGTGGCACCCTTACCCAGAGCTGCCCATGAACGACCAGTTCTACAATGC

FTLGGTTPYPELPMDQFYNA

520 I K (S) R M (K) P (D) H Y GTG

GATCAAGAGTGGTACGGATGCCAAGCCTGACCACGACTACCAAGTGAAG

CATCAAGAGGGGCTACCGCATGGCCAGCCTGCTCATGCCTCCGACGAGATCTAT

I K R G Y R H A Q P A H A S D E T Y

Score=38, Matched=63, Mismatched=27, Unmatched=1, Gaps=1  
 Window=20, Word-size=2, Density=Less, Gap-Penalty=4

20  
 30 60%

GT-AG

Titration and Mini-Prep of the Okayama-Berg  
cDNA Library (Normal Human Fibroblasts cDNA Library)

870629

# Titration of O-B cDNA library (DHS)

 $9.5 \times 10^4 / \text{ml}$  $1 \times 10^4 / \mu\text{l}$  ( $1 \times 10^9 / \text{ml}$ )

DH1

 $1.0 \text{ OD}_{550} = 0.5 (\sim 5 \times 10^7 \text{ cells/ml})$  $10 \mu\text{l} \rightarrow 1 \text{ ml}$  $1 \times 10^4 / \mu\text{l}$  $10 \mu\text{l} \rightarrow 1 \text{ ml}$  $1 \times 10^2 / \mu\text{l}$  $10 \mu\text{l} \rightarrow 1 \text{ ml}$  $1 / \mu\text{l}$  $10 \mu\text{l}$  $10^3$ 

4

111

 $1 \mu\text{l}$  $10^2$ 

3

11

 $10 \mu\text{l}$  $10$ 

2

 $1 \mu\text{l}$  $1$ 

1

 $22.45' - 10.45' (12.45')$  $- 16.30' (18.15')$ 

Titer :

 $1.1 \times 10^5 / \mu\text{l}$ 

870630

 $1.5 \times 10^2 / \text{plate} \times 66 \text{ plate}$  $10 \mu\text{l} / \text{plate} \times 66 \text{ plates} (660 \mu\text{l})$  $13.6 \mu\text{l}$  $1.5 \times 10^6 / 1000 \mu\text{l}$

870710

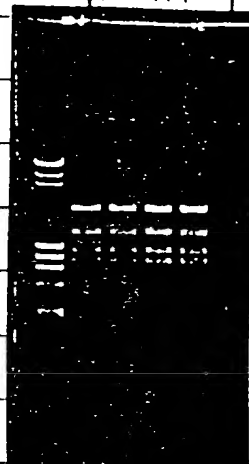
#248

Mini-prep. of O-B cDNA clone 1

O/N liquid cultures were stored in 15% glycerol at -20°C

#248

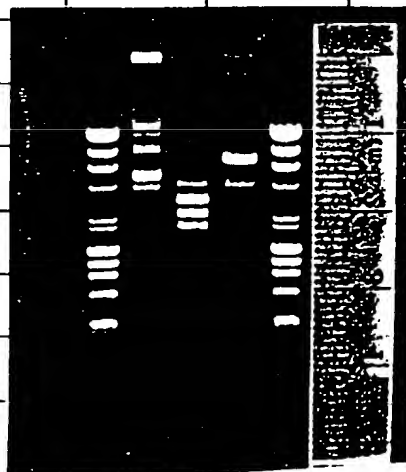
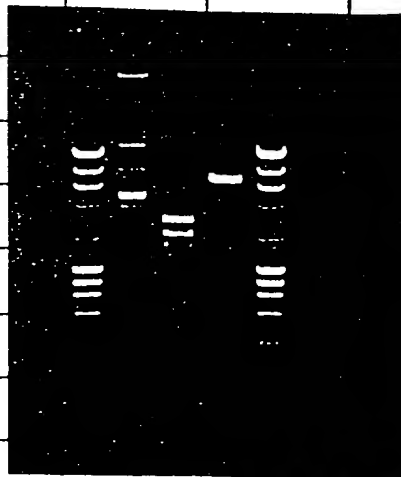
DNA	4 $\mu$ l (-1~4)
BamHI	1 $\mu$ l
10x B	1 $\mu$ l
ddH <sub>2</sub> O	4 $\mu$ l
Total	<u>10 <math>\mu</math>l</u>



OB vector 36  
- 1.7  
- 1.25  
- 1.0  
2.25 5.8 7.5 - 3.6 - 3.9 kb

DNA	4 $\mu$ l (1-1)
SalI or XhoI	1
10x B	1
ddH <sub>2</sub> O	4
Total	<u>10 <math>\mu</math>l</u>

Cont. XhoI SalI



8870711 M

Isolation of 0.2kbp Subfragment of  $\lambda$ EF 17 To Screen  
a M426 Human Embryo Fibroblast cDNA Library

#420

880103

Isolation of EcoRI 0.2kb fragment from pMF17-2

#352 437 ng/ $\mu$ l pUC13DNA 343  $\mu$ l 150  $\mu$ g\*  $\frac{0.2}{2.7+0.2}$ EcoRI 75  $\mu$ l10 $\times$ B 50  $\mu$ lRNase 10  $\mu$ lddH<sub>2</sub>O 22total 500  $\mu$ l

37°C 20 min

4% NuSieve gel

15 V const.

o/n

w/o circulation

EcoRI 0.2

T11

T11DEC

gel

0.83

1.93

1.76 g

NaI

2.1

4.9

4.4 ml

Gloss milk

15  $\mu$ l10  $\mu$ l10  $\mu$ l

Save TE

14.5

9.5

9.5  $\mu$ l11  $\mu$ g 0.25/0.5/2.25/1/1  $\mu$ l 0.5  $\mu$ l

#420 MF17-2 : 0.2kb fragment

80 ng/ $\mu$ l



880106

Nick translation to screen Toru's Library

#420 MF17-2 EcoRI 0.2kb (80ng/pl)

DNA 1.3 pl 104ng

SalI 10

II 5

32P 20

ddH<sub>2</sub>O 13.7

total 50 pl

filter

20

HB

100 ml

SSDNA

400 pl

SAM POS  
NOTIME  
MIN32P  
CPM %ERROR

1 1-1

1.00 1258039.0 0.18

$$1.2 \times 10^6 \times 10^2 / 104 \text{ ng}$$

$$(1.15 \times 10^9 / \text{ng})$$

Mini-Preparation of Plasmid DNA: DNA Clones TR1  
through 6 and TR8

#12 - #448

pEV7/TR1-8

880115

## Preparation of plasmid DNA pEV7 TR1-8.

w/o RNase

DNA	5 $\mu$ l	5 $\mu$ l
BamHI	1 $\mu$ l	SacI 1 $\mu$ l
10 $\times$ IB	1.5 $\mu$ l	10 $\times$ IB 1.5
RNase	1 $\mu$ l	1
ddH <sub>2</sub> O	6.5 $\mu$ l	6.5
total	15 $\mu$ l	15

Control

SVB/TII-A/ BamHI

SVB/BamHI XhoI

Control

SVB/TII-B/SacI #421 78ng/ $\lambda$ 

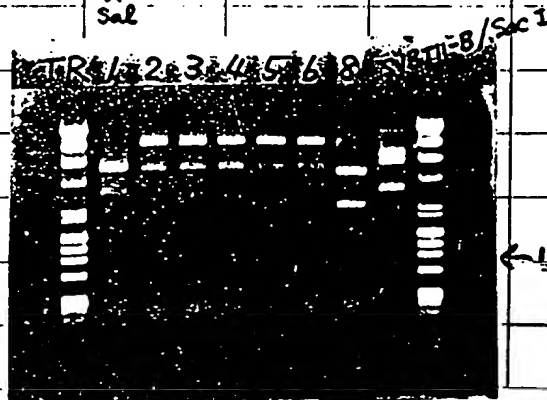
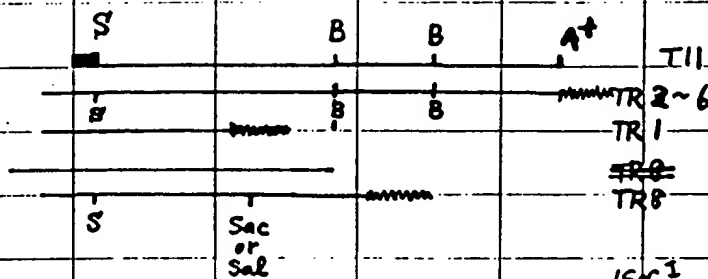
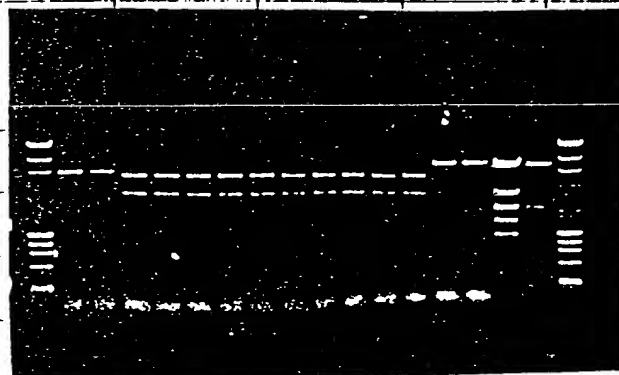
3.2, 0.3, 7.3, (6.5) kb

37°C 30min

tube

SalI 1

BamHI



Vector SacI 0.7kb

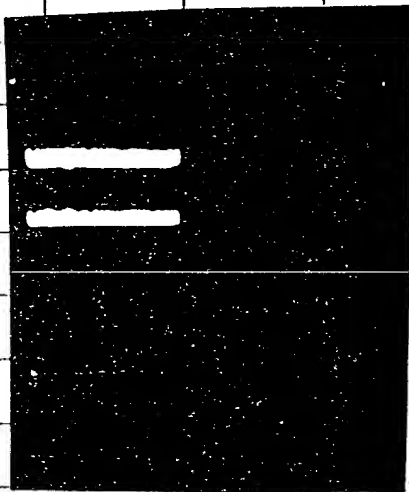
1/29 RNase (+)

Subcloning TR4

880216

Subcloning		TR4 BamHI	3.4kb fragment	into	SVX LTR2		
	#452	pCEV9/TR4	360µg/ml	pSVX 3032N	253µg/ml		
DNA	56µl	20µg		DNA	79	20µg	
BamHI	8	25µl		BamHI	8		
10x B	30			10x B	40		
ddH <sub>2</sub> O	206µl			ddH <sub>2</sub> O	273		
total	300µl	check 8µl		total	400	37°C 1hr	check 8µl
		0.8% Agarose	O/N		phenol ext.		

cut →



TR4 SVX (BamHI)



see Reverse side



glass milk	15µl			15:00 - (3hr)					
Ligation		Reaction							
Vector	SVX/BamHI #487	0.8	LTR2/BamHI #450 (100ng)	0.5	pUC18/SmaI 50ng, #486	25ng 0.5	pUC18/SmaI 25ng 0.5		
Insert	TR4 BamHI #488 (100ng)	2	TR4 BamHI #488 (100ng)	2	#470X6-N-L ≈25ng, 80ng	32ng 3.2	#470X6-N-S 80ng	32ng 3.2	
T4 ligase		1		1		1		1	
5x B		2		2		2		2	
ddH <sub>2</sub> O		4.2		4.5		3.3		3.3	
total		10		10		10		10	
For transformation of JM101		1µl		1µl		1		1	
		1/10µl		1/10µl		2/10		3/10	

Minipreparation of Plasmid DNA: pSSV/TR4 ( $\alpha$ -PDGF-R)  
and HPR ( $\beta$ -PDGF-R)

# # 557 # 556

880325

Miniprep of Plasmid DNA pSSV / TR4 or HPR

#557  
HPR

#556  
TR4

DNA 5 $\mu$ l

SalI 2 $\mu$ l

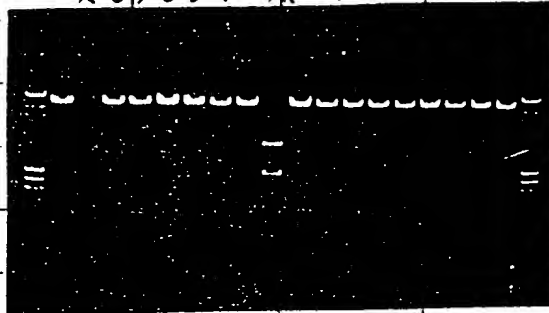
10 $\times$ B 1.5

ddH<sub>2</sub>O 5.5

RNase 1

15

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



DNA 5 $\mu$ l

XbaI 2 $\mu$ l

10 $\times$ B 1.5

ddH<sub>2</sub>O 5.5

RNase 1

15

#556 pSSV/TR4 SalI-RsaI(Xba)

#557 pSSV/HPR SalI-Hle(Xba)

HPR

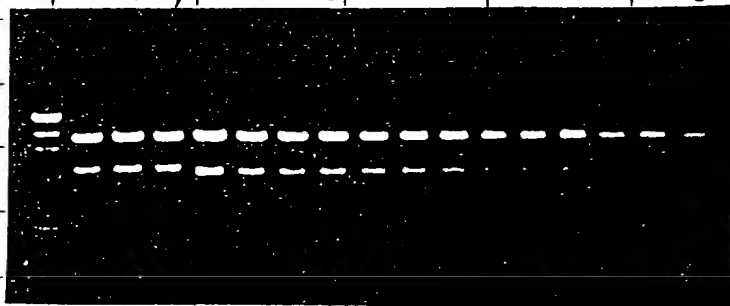
TR4

1 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18

SalI 2

10 $\times$ B 1.3

18.3 $\mu$ l



For large prep. (1l)

4

7

Binding of  $^{125}\text{I}$ -labeled Human PDGF to Control Mouse  
3T3 cells, Control COS-1 cells and COS-1 cells  
transfected with T11 ( $\alpha$ -PDGF-R) HPR  
( $\beta$ -PDGF-R) cDNA Expression Vectors



$^{125}\text{I}$  - PDGF binding

32D

8 wells + 4 wells

32D-HPR

8 wells + 4 wells

$^{125}\text{I}$  - C-SIS

0.5  $\mu\text{l}$  / well

8  $\mu\text{l}$  / total 8 ml

C-SIS

250 ng /  $\mu\text{l}$  100%

2  $\mu\text{l}$  / 8 wells

A-A

210 ng /  $\mu\text{l}$  75%

2  $\mu\text{l}$  / 8 wells

huPDGF

Lot 68-1198  
242 ng / 0.8  $\mu\text{l}$

12.9  $\mu\text{l}$  / 8 wells

w/o competition

$^{125}\text{I}$  - huPDGF

0.6  $\mu\text{l}$  / well (1 ng)

4.8  $\mu\text{l}$  / total 4 ml

w/o competition

huPDGF

~~250 ng / 0.8  $\mu\text{l}$~~   
242 ng / 0.8  $\mu\text{l}$

Control  
2HAcetate  
12.9  $\mu\text{l}$

12.9  $\mu\text{l}$  / 8 wells

1. Fibronectin coating

Inoculate  
(30 min.)

2 x 12 wells / 100 ng

2. Cells

a)

32D J64

85 ml / flask

b)

16.2 HPR

cfgr & resuspended in 50 ml DHEM

cfgr & " 48 ml DHEM

Plate 2 ml / [Fibronectin coated 12 wells plate] well

& Inoculate 30 min at 37°C

3 Wash the cells & take off the non-adherent cells  
by using Binding Buffer (DHEM + 25 mM Heparin  
1 mg/ml BSA)

4 Binding

RT

1 hr

Washing by 2 ml Binding Buffer x 4 times

5 Add 200  $\mu\text{l}$  Solubilizing Buffer & sit RT 30 min

6 Count

880328

[illegible]

*Master*

